

WHAT IS CLAIMED IS:

1. A humanity interface development system of a testing program of a circuit board, comprising:

a main menu by which an operator may select one of multiple items with data pre-built therein, the main menu including: building configuration of objects to be tested, defining footing of objects to be tested, using a program generator, building data of testing chapters, building documents and figure files of objects to be tested, building reference data, building intercepted data of coordinates of positions of parts, building relationships of items to failure rates of parts, and linking and compiling files, building of data of each object to be tested co-operating with the program generator to produce the required program, and the items of building data of testing chapters and linking and compiling files co-operating with steps of building of data of each object to be tested, so that the operator may conveniently use data base and programs that are built according to existing orders of the system for testing a circuit board.

2. The humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein building configuration of objects to be tested includes the following steps:

selecting a name of the object to be tested: displaying a name of the object to be selected from an existing data base of a display, choosing and identifying the name of the object;

displaying the data of the object to be tested: displaying original
chosen records in the data base to facilitate judgement of following addition
and amendment; and

selecting processed items: selecting items of addition, deletion,
amendment or returning to a previous page, wherein if the item of addition is
chosen, the operator needs to input the data of the new board object to be
tested, then store the data, and then return to the step of selecting the name of
the object to be tested; if the item of deletion is chosen, the data of the object
to be tested is deleted directly; if the item of amendment is chosen, the data of
the object to be tested is amended, and is stored; if the item of returning to the
previous page is chosen, the operator may return to the picture of the main
menu, whereby contents of each basic configuration of the objects to be
tested may be built.

3. The humanity interface development system of a testing program
of a circuit board in accordance with claim 1, wherein defining footing of
objects to be tested includes the following steps:

displaying a picture of the name of the selected object to be tested:
displaying the picture of the name and related illustration of the selected
object to be tested, to facilitate direct reference of the operator;

if it is a new object to be tested: judging if it is a new object to be
tested, if it is a new object to be tested, the operator may proceed the
following settings, including:

selecting a clamping tool: selecting an existing common clamping
tool or making a new clamping tool;

destining a new number: defining a new number to the new board to facilitate identification; and

inputting footing data: inputting data of each footing manually;

if it is not a new object to be tested, it means that the object to be tested is an electronic board that has generated the testing program, so that the data base of the system may directly display the record for identification of the operator;

selecting a processing manner: the operator may select printing and may select the printing item to print data of each chosen item for reference; if the operator selects ending, he needs to select the clamping tool, and has to select an existing common clamping tool or make a new clamping tool; if the operator selects the existing common clamping tool, the original footing data in the system may be processed directly, to reproduce the cleared file of the footing to the respective data menu, and the procedure is then ended; if the operator selects to make a new clamping tool, the procedure is directly ended.

4. The humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein the a procedure of using the program generator includes the following steps:

displaying the name of the object to be tested: displaying the name the object to be tested and the related data for identification of the designer;

confirming: if the operator confirms the object to be tested, the following procedure may be performed; if the operator does not confirm the object to be tested, the picture returns to the main menu;

selecting the program manner: the operator may respectively select the modes of the program parameter, including testing, debug or limit; if the operator selects the testing mode, he may input the testing parameter, if the operator selects the debug mode, he may input the debug parameter, after the two items of inputting the testing parameter and inputting the debug parameter are input, the system respectively enters the designs of test program or debug program, and the picture may indicate the flow chart button to prepare to proceed a step of selecting the testing flow chart; if the operator selects the limit mode, the picture indicates selecting the item of the chapter or section to be amended, and selecting a testing manner to select a testing manner such as the function test or debug test, and after selection to perform the step of selecting a testing number or selecting a testing number and debugging, then filling the limit value for each program or step, then selecting confirming the above steps and actions, if the above steps and actions are not confirmed, the picture returns to the main menu, if the above steps and actions are confirmed, the data in the data base may be changed, and the picture returns to the step of displaying the name of the object to be tested.

5. The humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein a procedure of selecting the testing flow chart includes: file maintenance or reproduction, and selecting a button of a testing flow chart.

6. The humanity interface development system of a testing program of a circuit board in accordance with claim 5, wherein selecting the item of

1 the testing flow chart may be changed and designed according to different
2 testing processes and manners, and the most complete process of selecting the
3 item of the testing flow chart includes the following steps: setting power
4 supply of the system, starting, a first pause, setting the exciting signal, a
5 second pause, setting a measuring signal, a third pause, closing the exciting
6 signal, a fourth pause, updating codes of the testing program, and updating
7 codes of the debug program.

8 7. The humanity interface development system of a testing program
9 of a circuit board in accordance with claim 6, wherein the procedure of
10 setting power supply of the system includes the following steps:

11 setting a flow chart of power supply: inputting values of voltage
12 and current, then selecting a picture of a next output mode, such as outputting
13 SSCheck Box, then selecting confirming, if the above actions are confirmed,
14 checking if the mode of the footing satisfies the standard mode of the footing,
15 such as the mode of Form C Relay 414, then checking if the preset power
16 supply of the footing is correct, if not, amending the footing definition and
17 returning to the step of setting the flow chart of power supply to repeat the
18 work; if the preset power supply of the footing is correct, storing the above
19 data, and then returning to the picture of selecting the testing flow chart.

20 8. The humanity interface development system of a testing program
21 of a circuit board in accordance with claim 6, wherein the starting procedure
22 includes the following steps:

23 starting the flow chart: the system directly judging a parameter to
24 directly enter a testing step or a debugging step, then inputting a content

number, then judging if it is a new step or an old step, to respectively enter the step of definition of a new step or download of an old step, then judging if the parameter and the step are reproduced to the next chapter or section, if so, changing the parameter, then selecting confirming, if the above action is confirmed, storing the new parameter, if the above action is not confirmed, returning to the picture of selecting the testing flow chart.

9. The humanity interface development system of a testing program of a circuit board in accordance with claim 6, wherein the processes of the first pause, the second pause, the third pause, and the fourth pause respectively include the steps of: filling a hint message, and storing the hint message.

10. The humanity interface development system of a testing program of a circuit board in accordance with claim 6, wherein the procedure of setting the exciting signal includes: selecting the exciting signal, then inputting values and conditions, then selecting confirmation, if the values and conditions are confirmed, then storing the values and the conditions, if the values and the conditions are not confirmed, returning to the picture of selecting the testing flow chart.

11. The humanity interface development system of a testing program of a circuit board in accordance with claim 6, wherein the procedure of setting a measuring signal includes a flow chart of setting the measuring signal which includes the following steps: directly selecting the measuring signal, then confirming if other instrument is used, when confirming other instrument is used, displaying the picture of the instrument and inputting the

values and conditions, when confirming no other instrument is used, directly inputting the values and conditions, then selecting confirmation, if the values and conditions are confirmed, storing the values and conditions, if the values and conditions are not confirmed, returning to the picture of selecting the testing flow chart.

12. The humanity interface development system of a testing program of a circuit board in accordance with claim 6, wherein the procedure of closing the exciting signal includes the flow chart of closing the exciting signal which includes the following steps: selecting the exciting signal to be closed, then selecting confirmation, if the selection is confirmed, storing the changed results, if the selection is not confirmed, returning to the picture of selecting the testing flow chart.

13. The humanity interface development system of a testing program of a circuit board in accordance with claim 6, wherein the procedures of updating codes of the testing program, and updating codes of the debug program include the following steps: judging if the column is blank, if the column is blank, directly displaying the hint, if the column is not blank, performing the action of capturing the program codes.

14. The humanity interface development system of a testing program of a circuit board in accordance with claim 5, wherein the process of file maintenance or reproduction includes the following steps:

selecting file maintenance or reproduction: selecting the process of file maintenance or reproduction, if the process of file maintenance is selected, it is necessary to select the manner of file maintenance, if the

1 process of reproduction is selected, it is necessary to select the manner of
2 reproduction; wherein,

3 if the operator selects the manner of file maintenance, it includes
4 the following steps:

5 selecting the class of the program code: selecting a testing
6 parameter or a debugging parameter, then returning to the picture of selecting
7 the testing flow chart, to respectively perform the design of the testing
8 program or the debugging program;

9 selecting amending the program code: selecting the content of
10 amendment for testing or debugging, so as to select the number of the
11 primary and secondary testing or debugging step, and to make sure the
12 content of the program, and selecting the manner of amendment for different
13 program code, so as to select the working process such as deletion, insertion
14 or cancel, then selecting confirmation, if selecting the cancel process, then
15 directly returning to the picture of selecting the testing flow chart, if selecting
16 the working process of deletion or insertion, then amending the content of the
17 data base, and then returning to the procedure of selecting amending the
18 program code;

19 selecting returning to the picture of the program generator or
20 returning to the picture of the main menu, then returning to the destined
21 position, to facilitate the following operator;

22 if the operator selects the manner of reproduction, it includes the
23 steps of selecting three modes of reproduction, including: the testing
24 programs being reproduced mutually, the testing programs being reproduced

to the debugging programs, and the debugging programs being reproduced mutually; after selection, filling the reproduced content, then selecting confirmation, if not confirmed, then returning to the picture of selecting the testing flow chart, if confirmed, then copying the reproduced content and returning to the picture of filling the reproduced content to repeat the above-mentioned work until the work is finished.

15. The humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein the procedure of building data of testing chapters includes the following steps: selecting the object to be tested; then displaying the testing contents to indicate the number and name of the testing contents of each chapter or section, and then inputting a representative code into the content of the picture to facilitate classification.

16. The humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein the procedure of building documents and figure files of objects to be tested includes the following steps: preparing the hint of documents and figure files, so that when the designer selects the item of building documents and figure files of objects to be tested, the picture may display the related hints immediately, to remind the designer of preparing the related documents and figure files for requirement of inputting, and then the designer may make sure building the documents and figure files of objects to be tested.

17. The humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein the procedure of building reference data includes the following steps: selecting a new board

1 or an old board, if selecting the new board, then building data of the practical
2 figures and images and data of the positions of the parts according to an
3 instruction, so as to input the figure file data of the files of the practical
4 figures and images and the files of the positions of the parts, and placing
5 them in the destined menu, if selecting the old board, then directly selecting
6 the data on the figure files by the cursor, and then displaying the image to
7 display the picture of the related figure files for confirmation of the designer.

8 18. The humanity interface development system of a testing
9 program of a circuit board in accordance with claim 1, wherein the procedure
10 of building intercepted data of coordinates of positions of parts includes the
11 following steps:

12 selecting the object to be tested: selecting the corresponding object
13 to be tested, or selecting the item of returning to the main menu to return to
14 the destined location;

15 selecting inspection or building: after selecting the object to be
16 tested, then selecting the item of selecting inspecting the circuit board or
17 building the data base, if selecting the item of inspecting the circuit board,
18 then selecting controlling the picture to directly amplify the inspection
19 picture, if selecting the item of building the data base, then selecting building
20 the related coordinate;

21 selecting controlling the picture: selecting locally amplifying the
22 picture by the mouse or amplifying the sub-picture; if selecting locally
23 amplifying the picture by the mouse, then moving the mouse to directly

1 inspect the picture, if selecting amplifying the sub-picture, then forming a
2 small-sized amplifying picture in the original picture;

3 selecting building the related coordinate: selecting the mode of
4 building the related coordinate for the reference point or member;

5 selecting building the coordinate of the reference point: directly
6 moving the cursor to select the position of the part, thereby forming a region
7 that may produce the related coordinates, and then selecting confirmation;

8 selecting building the coordinate of the member: building the
9 coordinate of the member, such as the electronic part of the circuit board to
10 be tested, including the following steps:

11 selecting the processing manner: selecting the processing manner of
12 amendment or addition;

13 amendment: directly selecting amendment of the picture of the part,
14 and then selecting confirmation;

15 addition: selecting the part, then selecting confirmation, then
16 inputting the representative code, and then selecting confirmation, whereby

17 the procedure of building intercepted data of coordinates of
18 positions of parts may be accomplished conveniently, so that each of the parts
19 of the circuit board may correspond to the data base of the system.

20 19. The humanity interface development system of a testing
21 program of a circuit board in accordance with claim 1, wherein the procedure
22 of building relationships of items to failure rates of parts includes the
23 following steps: selecting the name of the object to be tested; then displaying
24 the picture so as to indicate the picture of the corresponding part; inputting

the rate to indicate the part corresponding to the item and the failure rate of the corresponding part, to facilitate the analysis work of the testing program.

20. The humanity interface development system of a testing program of a circuit board in accordance with claim 1, wherein the procedure of linking and compiling files includes the following steps: selecting the name and picture of the object to be tested; after confirmation, then making the testing program by the compiling process, if not confirmed, returning to the main menu.